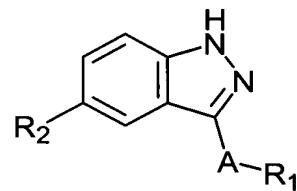


5 What is claimed is:

1. A method for treating or preventing MD in a patient, comprising administering to a patient in need thereof an effective amount of a JNK Inhibitor or a pharmaceutically acceptable salt, solvate or stereoisomer thereof.

10 2. A method for treating or preventing MD in a patient, comprising administering to a patient in need thereof an effective amount of a compound having the following formula:



or a pharmaceutically acceptable salt, solvate or stereoisomer thereof,

15 wherein:

A is a direct bond, -(CH₂)_a-, -(CH₂)_bCH=CH(CH₂)_c-; or -(CH₂)_bC≡C(CH₂)_c-;

R₁ is aryl, heteroaryl or heterocycle fused to phenyl, each being optionally substituted with one to four substituents independently from R₃;

R₂ is -R₃, -R₄, -(CH₂)_bC(=O)R₅, -(CH₂)_bC(=O)OR₅, -(CH₂)_bC(=O)NR₅R₆,

20 -(CH₂)_bC(=O)NR₅(CH₂)_cC(=O)R₆, -(CH₂)_bNR₅C(=O)R₆, -(CH₂)_bNR₅C(=O)NR₆R₇,
-(CH₂)_bNR₅R₆, -(CH₂)_bOR₅, -(CH₂)_bSO_dR₅ or -(CH₂)_bSO₂NR₅R₆;

a is 1, 2, 3, 4, 5 or 6;

b and c are the same or different and at each occurrence independently 0, 1, 2, 3 or 4;

d is at each occurrence 0, 1 or 2;

25 R₃ is at each occurrence independently halogen, hydroxy, carboxy, alkyl, alkoxy, haloalkyl, acyloxy, thioalkyl, sulfinylalkyl, sulfonylalkyl, hydroxyalkyl, aryl, substituted

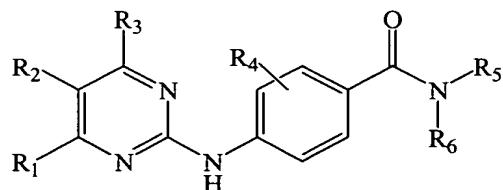
5 aryl, arylalkyl, heterocycle, heterocycloalkyl, -C(=O)OR₈, -OC(=O)R₈, -C(=O)NR₈R₉,
-C(=O)NR₈OR₉, -SO₂NR₈R₉, -NR₈SO₂R₉, -CN, -NO₂, -NR₈R₉, -NR₈C(=O)R₉,
-NR₈C(=O)(CH₂)_bOR₉, -NR₈C(=O)(CH₂)_bR₉, -O(CH₂)_bNR₈R₉, or heterocycle fused to
phenyl;

10 R₄ is alkyl, aryl, arylalkyl, heterocycle or heterocycloalkyl, each being optionally
substituted with one to four substituents independently from R₃, or R₄ is halogen or
hydroxy;

15 R₅, R₆ and R₇ are the same or different and at each occurrence independently hydrogen,
alkyl, aryl, arylalkyl, heterocycle or heterocycloalkyl, wherein each of R₅, R₆ and R₇ are
optionally substituted with one to four substituents independently from R₃; and R₈ and R₉
are the same or different and at each occurrence independently hydrogen, alkyl, aryl,
arylalkyl, heterocycle, or heterocycloalkyl, or R₈ and R₉ taken together with the atom or
atoms to which they are bonded form a heterocycle, wherein each of R₈, R₉, and R₈ and
R₉ taken together to form a heterocycle are optionally substituted with one to four
substituents independently from R₃.

20

3. A method for treating or preventing MD in a patient, comprising administering to
a patient in need thereof an effective amount of a compound having the following
formula:



25

or a pharmaceutically acceptable salt, solvate or stereoisomer thereof,

wherein:

30 R₁ is aryl or heteroaryl optionally substituted with one to four substituents independently
from R₇;

5 R₂ is hydrogen;

R₃ is hydrogen or lower alkyl;

R₄ represents one to four optional substituents, wherein each substituent is the same or different and independently halogen, hydroxy, lower alkyl or lower alkoxy;

R₅ and R₆ are the same or different and independently -R₈, -(CH₂)_aC(=O)R₉,

10 -(CH₂)_aC(=O)OR₉, -(CH₂)_aC(=O)NR₉R₁₀, -(CH₂)_aC(=O)NR₉(CH₂)_bC(=O)R₁₀,
-(CH₂)_aNR₉C(=O)R₁₀, (CH₂)_aNR₁₁C(=O)NR₉R₁₀, -(CH₂)_aNR₉R₁₀, -(CH₂)_aOR₉,
-(CH₂)_aSO_cR₉ or -(CH₂)_aSO₂NR₉R₁₀;

or R₅ and R₆ taken together with the nitrogen atom to which they are attached to form a heterocycle or substituted heterocycle;

15 R₇ is at each occurrence independently halogen, hydroxy, cyano, nitro, carboxy, alkyl, alkoxy, haloalkyl, acyloxy, thioalkyl, sulfinylalkyl, sulfonylalkyl, hydroxyalkyl, aryl, arylalkyl, heterocycle, heterocycloalkyl, -C(=O)OR₈, -OC(=O)R₈, -C(=O)NR₈R₉,
-C(=O)NR₈OR₉, -SO_cR₈, -SO_cNR₈R₉, -NR₈SO_cR₉, -NR₈R₉, -NR₈C(=O)R₉,
-NR₈C(=O)(CH₂)_bOR₉, -NR₈C(=O)(CH₂)_bR₉, -O(CH₂)_bNR₈R₉, or heterocycle fused to
20 phenyl;

R₈, R₉, R₁₀ and R₁₁ are the same or different and at each occurrence independently hydrogen, alkyl, substituted alkyl, aryl, arylalkyl, heterocycle or heterocycloalkyl;

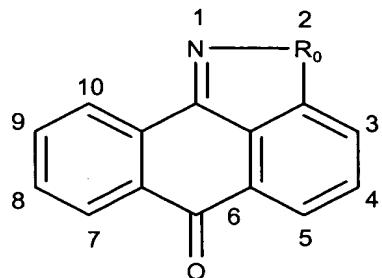
or R₈ and R₉ taken together with the atom or atoms to which they are attached to form a heterocycle;

25 a and b are the same or different and at each occurrence independently 0, 1, 2, 3 or 4; and

c is at each occurrence 0, 1 or 2.

4. A method for treating or preventing MD in a patient, comprising administering to a patient in need thereof an effective amount of a compound having the following

30 formula:



or a pharmaceutically acceptable salt, solvate or stereoisomer thereof,

wherein R0 is -O-, -S-, -S(O)-, -S(O)2-, NH or -CH2-;

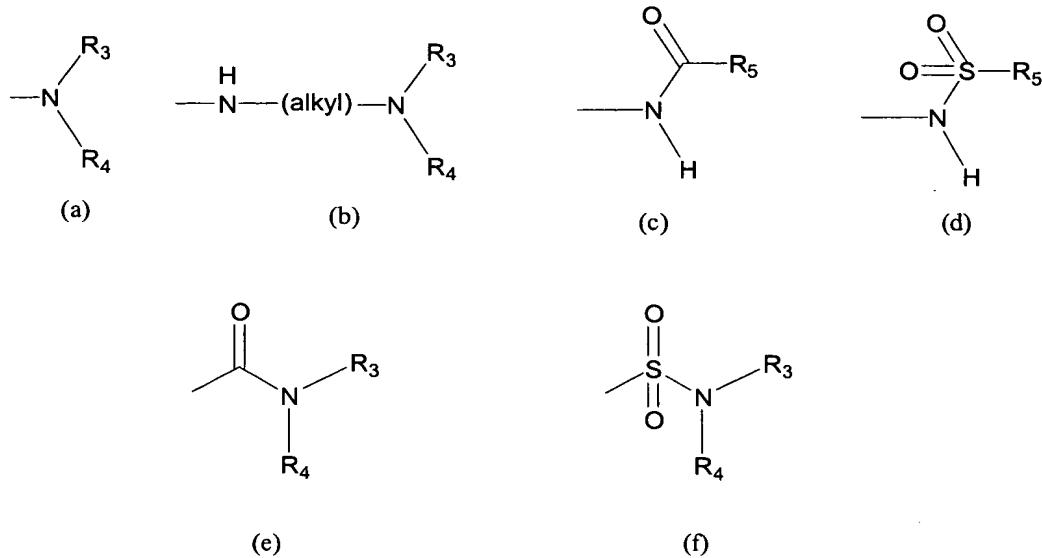
the compound being (i) unsubstituted, (ii) monosubstituted and having a first substituent,

10 or (iii) disubstituted and having a first substituent and a second substituent;

the first or second substituent, when present, is at the 3, 4, 5, 7, 8, 9, or 10 position,

wherein the first and second substituent, when present, are independently alkyl, hydroxy, halogen, nitro, trifluoromethyl, sulfonyl, carboxyl, alkoxy carbonyl, alkoxy, aryl, aryloxy, arylalkyloxy, arylalkyl, cycloalkylalkyloxy, cycloalkyloxy, alkoxyalkyl, alkoxyalkoxy,

15 aminoalkoxy, mono-alkylaminoalkoxy, di-alkylaminoalkoxy, or a group represented by formula (a), (b), (c), (d), (e), or (f):



5 wherein R₃ and R₄ are taken together and represent alkylidene or a heteroatom-containing cyclic alkylidene or R₃ and R₄ are independently hydrogen, alkyl, cycloalkyl, aryl, arylalkyl, cycloalkylalkyl, aryloxyalkyl, alkoxyalkyl, aminoalkyl, mono-alkylaminoalkyl, or di-alkylaminoalkyl; and

10 R₅ is hydrogen, alkyl, cycloalkyl, aryl, arylalkyl, cycloalkylalkyl, alkoxy, alkoxyalkyl, alkoxycarbonylalkyl, amino, mono-alkylamino, di-alkylamino, arylamino, arylalkylamino, cycloalkylamino, cycloalkylalkylamino, aminoalkyl, mono-alkylaminoalkyl, or di-alkylaminoalkyl.

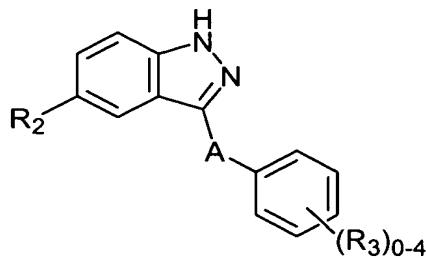
5. The method of claim 2 wherein A is a direct bond.

15 6. The method of claim 2 wherein A is -(CH₂)_a-.

7. The method of claim 2 wherein A is -(CH₂)_bCH=CH(CH₂)_c-.

8. The method of claim 2 wherein A is -(CH₂)_bC≡C(CH₂)_c-.

9. The method of claim 2 wherein the compound has the following formula:



or a pharmaceutically acceptable salt, solvate or stereoisomer thereof,

wherein:

A is a direct bond, $-(CH_2)_a-$, $-(CH_2)_bCH=CH(CH_2)_c-$, or $-(CH_2)_bC\equiv C(CH_2)_c-$;

R₁ is aryl, heteroaryl or heterocycle fused to phenyl, each being optionally substituted

10 with one to four substituents independently from R₃;

R₂ is -R₃, -R₄, -(CH₂)_bC(=O)R₅, -(CH₂)_bC(=O)OR₅, -(CH₂)_bC(=O)NR₅R₆,
 $-(CH_2)_bC(=O)NR_5(CH_2)_cC(=O)R_6$, $-(CH_2)_bNR_5C(=O)R_6$, $-(CH_2)_bNR_5C(=O)NR_6R_7$,
 $-(CH_2)_bNR_5R_6$, $-(CH_2)_bOR_5$, $-(CH_2)_bSO_dR_5$ or $-(CH_2)_bSO_2NR_5R_6$;

a is 1, 2, 3, 4, 5 or 6;

15 b and c are the same or different and at each occurrence independently 0, 1, 2, 3 or 4;

d is at each occurrence 0, 1 or 2;

R₃ is at each occurrence independently halogen, hydroxy, carboxy, alkyl, alkoxy,
haloalkyl, acyloxy, thioalkyl, sulfinylalkyl, sulfonylalkyl, hydroxyalkyl, aryl, arylalkyl,
heterocycle, heterocycloalkyl, -C(=O)OR₈, -OC(=O)R₈, -C(=O)NR₈R₉, -C(=O)NR₈OR₉,
20 -SO₂NR₈R₉, -NR₈SO₂R₉, -CN, -NO₂, -NR₈R₉, -NR₈C(=O)R₉, -NR₈C(=O)(CH₂)_bOR₉,
-NR₈C(=O)(CH₂)_bR₉, -O(CH₂)_bNR₈R₉, or heterocycle fused to phenyl;

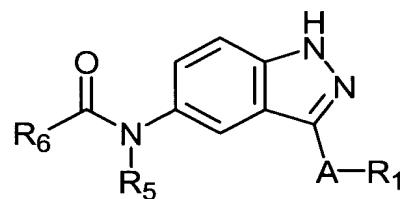
R₄ is alkyl, aryl, arylalkyl, heterocycle or heterocycloalkyl, each being optionally
substituted with one to four substituents independently from R₃, or R₄ is halogen or
hydroxy;

5 R₅, R₆ and R₇ are the same or different and at each occurrence independently hydrogen, alkyl, aryl, arylalkyl, heterocycle or heterocycloalkyl, wherein each of R₅, R₆ and R₇ are optionally substituted with one to four substituents independently from R₃; and

R₈ and R₉ are the same or different and at each occurrence independently hydrogen, alkyl, aryl, arylalkyl, heterocycle, or heterocycloalkyl, or R₈ and R₉ taken together with
10 the atom or atoms to which they are bonded form a heterocycle, wherein each of R₈, R₉, and R₈ and R₉ taken together to form a heterocycle are optionally substituted with one to four substituents independently from R₃.

10. The method of claim 2 wherein the compound has the following formula:

15



or a pharmaceutically acceptable salt, solvate or stereoisomer thereof,

wherein:

20 A is a direct bond, -(CH₂)_a-, -(CH₂)_bCH=CH(CH₂)_c-, or -(CH₂)_bC≡C(CH₂)_c-;

R₁ is aryl, heteroaryl or heterocycle fused to phenyl, each being optionally substituted with one to four substituents independently from R₃;

R₂ is -R₃, -R₄, -(CH₂)_bC(=O)R₅, -(CH₂)_bC(=O)OR₅, -(CH₂)_bC(=O)NR₅R₆,
-(CH₂)_bC(=O)NR₅(CH₂)_cC(=O)R₆, -(CH₂)_bNR₅C(=O)R₆, -(CH₂)_bNR₅C(=O)NR₆R₇,

25 -(CH₂)_bNR₅R₆, -(CH₂)_bOR₅, -(CH₂)_bSO_dR₅ or -(CH₂)_bSO₂NR₅R₆;

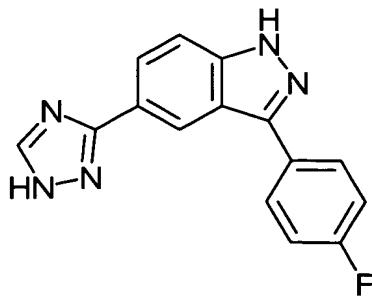
a is 1, 2, 3, 4, 5 or 6;

b and c are the same or different and at each occurrence independently 0, 1, 2, 3 or 4;

d is at each occurrence 0, 1 or 2;

- 5 R₃ is at each occurrence independently halogen, hydroxy, carboxy, alkyl, alkoxy, haloalkyl, acyloxy, thioalkyl, sulfinylalkyl, sulfonylalkyl, hydroxyalkyl, aryl, arylalkyl, heterocycle, heterocycloalkyl, -C(=O)OR₈, -OC(=O)R₈, -C(=O)NR₈R₉, -C(=O)NR₈OR₉, -SO₂NR₈R₉, -NR₈SO₂R₉, -CN, -NO₂, -NR₈R₉, -NR₈C(=O)R₉, -NR₈C(=O)(CH₂)_bOR₉, -NR₈C(=O)(CH₂)_bR₉, -O(CH₂)_bNR₈R₉, or heterocycle fused to phenyl;
- 10 R₄ is alkyl, aryl, arylalkyl, heterocycle or heterocycloalkyl, each being optionally substituted with one to four substituents independently from R₃, or R₄ is halogen or hydroxy;
- 15 R₅, R₆ and R₇ are the same or different and at each occurrence independently hydrogen, alkyl, aryl, arylalkyl, heterocycle or heterocycloalkyl, wherein each of R₅, R₆ and R₇ are optionally substituted with one to four substituents independently from R₃; and
- 20 R₈ and R₉ are the same or different and at each occurrence independently hydrogen, alkyl, aryl, arylalkyl, heterocycle, or heterocycloalkyl, or R₈ and R₉ taken together with the atom or atoms to which they are bonded form a heterocycle, wherein each of R₈, R₉, and R₈ and R₉ taken together to form a heterocycle are optionally substituted with one to four substituents independently from R₃.

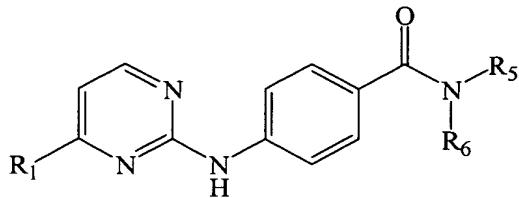
11. The method of claim 2 wherein the compound has the following formula:



or a pharmaceutically acceptable salt, solvate or stereoisomer thereof.

- 25 12. The method of claim 3, wherein the compound has the following formula:

5



or a pharmaceutically acceptable salt, solvate or stereoisomer thereof,

wherein:

R₁ is aryl or heteroaryl optionally substituted with one to four substituents independently from R₇;

10 R₂ is hydrogen;

R₃ is hydrogen or lower alkyl;

R₄ represents one to four optional substituents, wherein each substituent is the same or different and independently halogen, hydroxy, lower alkyl or lower alkoxy;

R₅ and R₆ are the same or different and independently -R₈, -(CH₂)_aC(=O)R₉,

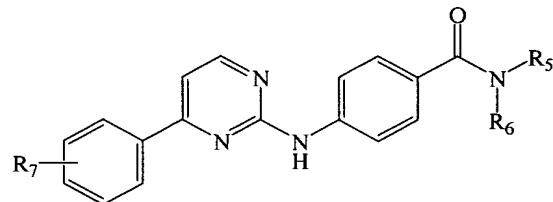
15 -(CH₂)_aC(=O)OR₉, -(CH₂)_aC(=O)NR₉R₁₀, -(CH₂)_aC(=O)NR₉(CH₂)_bC(=O)R₁₀,
-(CH₂)_aNR₉C(=O)R₁₀, (CH₂)_aNR₁₁C(=O)NR₉R₁₀, -(CH₂)_aNR₉R₁₀, -(CH₂)_aOR₉,
-(CH₂)_aSO_cR₉ or -(CH₂)_aSO₂NR₉R₁₀;

or R₅ and R₆ taken together with the nitrogen atom to which they are attached to form a heterocycle or substituted heterocycle;

20 R₇ is at each occurrence independently halogen, hydroxy, cyano, nitro, carboxy, alkyl, alkoxy, haloalkyl, acyloxy, thioalkyl, sulfinylalkyl, sulfonylalkyl, hydroxyalkyl, aryl, arylalkyl, heterocycle, heterocycloalkyl, -C(=O)OR₈, -OC(=O)R₈, -C(=O)NR₈R₉,
-C(=O)NR₈OR₉, -SO_cR₈, -SO_cNR₈R₉, -NR₈SO_cR₉, -NR₈R₉, -NR₈C(=O)R₉,
-NR₈C(=O)(CH₂)_bOR₉, -NR₈C(=O)(CH₂)_bR₉, -O(CH₂)_bNR₈R₉, or heterocycle fused to
25 phenyl;

- 5 R₈, R₉, R₁₀ and R₁₁ are the same or different and at each occurrence independently hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, arylalkyl, heterocycle, heterocycloalkyl;
- or R₈ and R₉ taken together with the atom or atoms to which they are attached to form a heterocycle;
- 10 a and b are the same or different and at each occurrence independently 0, 1, 2, 3 or 4; and c is at each occurrence 0, 1 or 2.

13. The method of claim 3, wherein the compound has the following formula:



15

or a pharmaceutically acceptable salt, solvate or stereoisomer thereof,

wherein:

- R₁ is aryl or heteroaryl optionally substituted with one to four substituents independently from R₇;
- R₂ is hydrogen;
- R₃ is hydrogen or lower alkyl;
- R₄ represents one to four optional substituents, wherein each substituent is the same or different and independently halogen, hydroxy, lower alkyl or lower alkoxy;
- 25 R₅ and R₆ are the same or different and independently -R₈, -(CH₂)_aC(=O)R₉, -(CH₂)_aC(=O)OR₉, -(CH₂)_aC(=O)NR₉R₁₀, -(CH₂)_aC(=O)NR₉(CH₂)_bC(=O)R₁₀, -(CH₂)_aNR₉C(=O)R₁₀, (CH₂)_aNR₁₁C(=O)NR₉R₁₀, -(CH₂)_aNR₉R₁₀, -(CH₂)_aOR₉, -(CH₂)_aSO_cR₉ or -(CH₂)_aSO₂NR₉R₁₀;

5 or R₅ and R₆ taken together with the nitrogen atom to which they are attached to form a heterocycle or substituted heterocycle;

R₇ is at each occurrence independently halogen, hydroxy, cyano, nitro, carboxy, alkyl, alkoxy, haloalkyl, acyloxy, thioalkyl, sulfinylalkyl, sulfonylalkyl, hydroxyalkyl, aryl, arylalkyl, heterocycle, heterocycloalkyl, -C(=O)OR₈, -OC(=O)R₈, -C(=O)NR₈R₉,
10 -C(=O)NR₈OR₉, -SO_cR₈, -SO_cNR₈R₉, -NR₈SO_cR₉, -NR₈R₉, -NR₈C(=O)R₉,
-NR₈C(=O)(CH₂)_bOR₉, -NR₈C(=O)(CH₂)_bR₉, -O(CH₂)_bNR₈R₉, or heterocycle fused to phenyl;

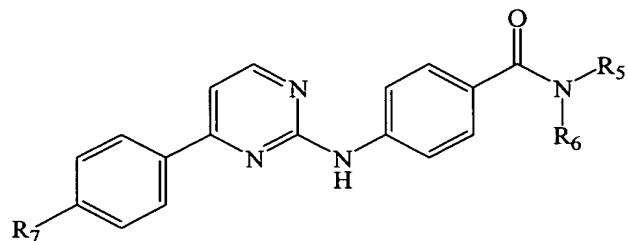
R₈, R₉, R₁₀ and R₁₁ are the same or different and at each occurrence independently hydrogen, alkyl, aryl, arylalkyl, heterocycle, heterocycloalkyl;

15 or R₈ and R₉ taken together with the atom or atoms to which they are attached to form a heterocycle;

a and *b* are the same or different and at each occurrence independently 0, 1, 2, 3 or 4; and

c is at each occurrence 0, 1 or 2.

20 14. The method of claim 3, wherein the compound has the following formula:



or a pharmaceutically acceptable salt, solvate or stereoisomer thereof,

25 wherein:

R₁ is aryl or heteroaryl optionally substituted with one to four substituents independently from R₇;

R₂ is hydrogen;

5 R₃ is hydrogen or lower alkyl;

R₄ represents one to four optional substituents, wherein each substituent is the same or different and independently halogen, hydroxy, lower alkyl or lower alkoxy;

R₅ and R₆ are the same or different and independently -R₈, -(CH₂)_aC(=O)R₉, -(CH₂)_aC(=O)OR₉, -(CH₂)_aC(=O)NR₉R₁₀, -(CH₂)_aC(=O)NR₉(CH₂)_bC(=O)R₁₀,

10 -(CH₂)_aNR₉C(=O)R₁₀, (CH₂)_aNR₁₁C(=O)NR₉R₁₀, -(CH₂)_aNR₉R₁₀, -(CH₂)_aOR₉, -(CH₂)_aSO_cR₉ or -(CH₂)_aSO₂NR₉R₁₀;

or R₅ and R₆ taken together with the nitrogen atom to which they are attached to form a heterocycle;

R₇ is at each occurrence independently halogen, hydroxy, cyano, nitro, carboxy, alkyl, alkoxy, haloalkyl, acyloxy, thioalkyl, sulfinylalkyl, sulfonylalkyl, hydroxylalkyl, aryl, arylalkyl, heterocycle, heterocycloalkyl, -C(=O)OR₈, -OC(=O)R₈, -C(=O)NR₈R₉, -C(=O)NR₈OR₉, -SO_cR₈, -SO_cNR₈R₉, -NR₈SO_cR₉, -NR₈R₉, -NR₈C(=O)R₉, -NR₈C(=O)(CH₂)_bOR₉, -NR₈C(=O)(CH₂)_bR₉, -O(CH₂)_bNR₈R₉, or heterocycle fused to phenyl;

20 R₈, R₉, R₁₀ and R₁₁ are the same or different and at each occurrence independently hydrogen, alkyl, substituted alkyl, aryl, arylalkyl, heterocycle, heterocycloalkyl;

or R₈ and R₉ taken together with the atom or atoms to which they are attached to form a heterocycle;

a and *b* are the same or different and at each occurrence independently 0, 1, 2, 3 or 4; and

25 *c* is at each occurrence 0, 1 or 2.

15. The method of claim 4, wherein R₀ is -O-.

16. The method of claim 4, wherein R₀ is -S-.

5 17. The method of claim 4, wherein R₀ is -S(O)-.

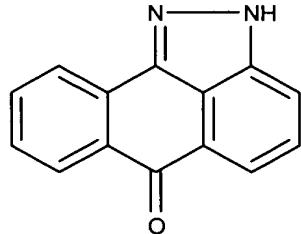
18. The method of claim 4, wherein R₀ is -S(O)₂-.

19. The method of claim 4, wherein R₀ is NH.

10

20. The method of claim 4, wherein R₀ is CH₂-.

21. The method of claim 4, wherein the compound has the following formula:



15

or a pharmaceutically acceptable salt, solvate or stereoisomer thereof.

22. The method of claim 1, further comprising administering an effective amount of a steroid, a light sensitizer, an integrin, an antioxidant, an interferon, a xanthine derivative, 20 a growth hormone, a neutrotrophic factor, a regulator of neovascularization, an anti-VEGF antibody, a prostaglandin, an antibiotic, a phytoestrogen, an anti-inflammatory compound, an IMiD®, a SelCID®, an antiangiogenesis compound, or a combination thereof.

23. The method of claim 2, further comprising administering an effective amount of a steroid, a light sensitizer, an integrin, an antioxidant, an interferon, a xanthine derivative, a growth hormone, a neutrotrophic factor, a regulator of neovascularization, an anti-VEGF antibody, a prostaglandin, an antibiotic, a phytoestrogen, an anti-inflammatory compound, an IMiD®, a SelCID®, an antiangiogenesis compound, or a combination thereof.

- 5 24. The method of claim 3, further comprising administering an effective amount of a steroid, a light sensitizer, an integrin, an antioxidant, an interferon, a xanthine derivative, a growth hormone, a neutrotrophic factor, a regulator of neovascularization, an anti-VEGF antibody, a prostaglandin, an antibiotic, a phytoestrogen, an anti-inflammatory compound, an IMiD®, a SelCID®, an antiangiogenesis compound, or a combination thereof.
- 10
25. The method of claim 4, further comprising administering an effective amount of a steroid, a light sensitizer, an integrin, an antioxidant, an interferon, a xanthine derivative, a growth hormone, a neutrotrophic factor, a regulator of neovascularization, an anti-VEGF antibody, a prostaglandin, an antibiotic, a phytoestrogen, an anti-inflammatory compound, an IMiD®, a SelCID®, an antiangiogenesis compound, or a combination thereof.
- 15
26. The method of claim 1, wherein the MD is wet MD.
27. The method of claim 1, wherein the MD is dry MD.
28. The method of claim 1, further comprising the administration of verteporfin.
- 20 29. The method of claim 22, wherein antiangiogenesis compound is thalidomide.
30. The method of claim 22, wherein the anti-VEGF antibody is rhuFab.
31. The method of claim 22, wherein the xanthine derivative is pentoxifylline.
32. The method of claim 22, wherein the interferon is interferon-2 α .
33. The method of claim 1, further comprising administering laser photocoagulation therapy.
- 25
34. The method of claim 1 further comprising administering photodynamic therapy.
35. A method for treating or preventing ARM, CNVM, PED or atrophy of RPE, which comprises administering to a patient in need of such treatment or prevention an

5 effective amount of a JNK inhibitor or a pharmaceutically acceptable salt, solvate or stereoisomer thereof.

36. The method of claim 35, further comprising administering an effective amount of a steroid, a light sensitizer, an integrin, an antioxidant, an interferon, a xanthine derivative, a growth hormone, a neutrotrophic factor, a regulator of neovascularization,
10 an anti-VEGF antibody, a prostaglandin, an antibiotic, a phytoestrogen, an anti-inflammatory compound or an antiangiogenesis compound.

37. A pharmaceutical composition comprising an effective amount of a JNK Inhibitor and a steroid, a light sensitizer, an integrin, an antioxidant, an interferon, a xanthine derivative, a growth hormone, a neutrotrophic factor, a regulator of neovascularization, an anti-VEGF antibody, a prostaglandin, an antibiotic, a phytoestrogen, an antiangiogenesis compound, or a combination thereof.
15